

ON THE LARVAL TROMBIDIID MITE (*TROMBICULA HIRSTI* L. SAMBON)
 THAT CAUSES THE "SCRUB ITCH" OF NORTHERN QUEENSLAND AND
 THE COORONG, SOUTH AUSTRALIA⁽¹⁾.

By STANLEY HIRST

(Zoological Dept., University of Adelaide, South Australia).

[Read April 11, 1929.]

The larval Trombidiid mite known as the "Scrub Itch Mite," in Northern Queensland, was described by Louis Sambon under the name *Trombicula hirsti* in July, 1927. The original specimens were found on human beings at Innisfail, and I have since re-examined them, and also examples from Tully. The same species of *Trombicula* attacks man in the South-Eastern districts of South Australia, from Kingston to Robe, and also in the direction of Mount Gambier. During a recent visit to Robe (December 3-6, 1928), I was able to collect a large number of specimens of this mite. It is extremely abundant during the warmer months, especially January. This larval form is chiefly found amongst the undergrowth beneath the Tea-trees. It has several local names, such as "The Robe Mite," "Tea-tree Mite," and "Red Spider." Persons walking in the Tea-tree scrub, or camping therein, are often badly bitten by this pest, and sometimes severe irritation, which may last for days, is caused by its bites. It is pretty certain that this mite, known variously as the "Scrub Itch Mite" of North Queensland, and also "Tea-tree Itch Mite" of South Australia, is identical with the form described by Hatori under the name *Trombicula pseudo-akamushi*. The latter name has, however, also been used for another species by Tanaka. Further investigation of the Japanese literature is necessary before the correct name can be definitely settled.⁽²⁾ The species has a wide distribution occurring in Japan, Sumatra, and the Malay Peninsula, besides Australia. So far this mite is not known to convey disease, but allied forms, viz., *Trombicula akamushi* Brumpt, and *T. deliensis* Walch, are known to transmit varieties of tropical typhus or pseudo-typhus. Another species, *Trombicula (Leeuwenhoekia) australiensis* Hirst, molests human beings in the Ashfield district of Sydney, New South Wales, and is also known to occur in Sumatra. The following is a description of this species of larval *Trombicula*.

TROMBICULA HIRSTI, Sambon.

Ann. Mag. Nat. Hist. (9) xx., pp. 157-161 (July, 1927).

Ann. Trop. Med. Parasitology, xxii., p. 67 (June, 1928).

Dorsal scutum large as in *T. novae-hollandiae*, n. sp. (from D'Estree Bay, Kangaroo Island, South Australia), but although the posterior margin is convex as in that species, it is differently shaped, being cut off rather sharply (more angular) instead of rounded off gradually at the outer corners. Pseudostigmal hairs very fine and fairly long, only the distal end being plumose. Anterior lateral hairs rather slender and fairly long. The anterior median very similar to the anterior laterals. Posterior lateral hairs of scutum also rather long and slender,

(1) The cost of this and other papers on Australian Acari has been partly met by a government grant received through the Royal Society, Burlington House, London, W.

(2) In the "Key-Catalogue of the Crustacea and Arachnoids of Importance to Public Health," Washington, Hygienic Lab. Rep. No. 148, 1927, p. 269, *T. pseudo-akamushi* is considered to be a "confused species."

being slightly the longest. Hairs on rest of dorsum about the same length as those on the dorsal scutum and rather few, about twenty to twenty-four usually being present. They are arranged as follows: 2, 6, 6, 4, 2, or 2, 6, 6, 2, 2, 2. Hairs on venter few in number. Hair on galea fine and apparently plain, being without feathering. Claw of palp, bifid. There are about six plumose hairs on the tarsus of the palp, and also two plain unfeathered rod-like setae. Tarsus of first leg with a very long and fine, plain, unfeathered, tactile seta on its dorsal surface, besides the plumose hairs.

Measurements.—Length of body, 187-228 μ ; length of first leg (not including coxa), 238 μ ; length of second leg (?); length of third leg, 245-270 μ . Length of dorsal scutum (in middle), 60-68 μ ; its greatest width, 90-97 μ . Length of anterior median hair of scutum, 45-46 μ ; of anterior lateral hairs, 41-46 μ ; of posterior lateral hairs of scutum, 49-54 μ ; of sensory (pseudostigmal) hairs, 47-50 μ . Length of hairs on rest of scutum, 41-48 μ .

Hab.—Innisfail, Queensland (type locality). Also Tully, Queensland, and the Coorong District of South Australia, from Kingston to Mount Gambier.

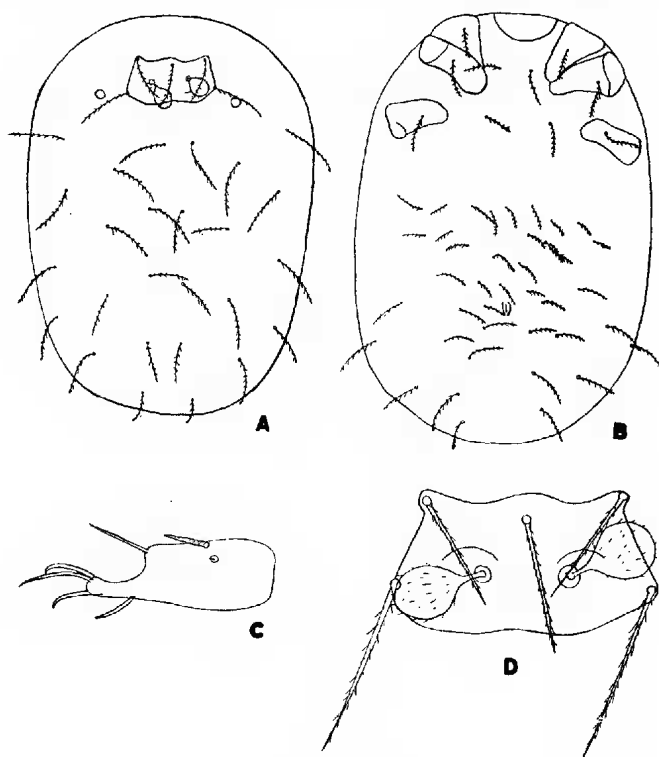


Fig. 1.

Schongastia coorongensis, n. sp.—A., Dorsal aspect of body; B., Ventral aspect of body; C., Tarsus of first leg; D., Dorsal scutum.

Schongastia coorongensis, n. sp.

A dead rat picked up in a lane at Robe by the author was found to have clusters of harvest bugs in both ears. On examination, the species proved to be

quite distinct from the Tea-tree Mite and, apparently, undescribed. The description of this new form is as follows:—

Dorsal scutum rather small and not very long, the width being slightly more than twice the length. Posterior margin of scutum shaped as shown in fig. 1. Anterior median unpaired hair of scutum longer than the anterior laterals. Posterior lateral hairs on scutum the longest. Sensory hairs with the distal end globular. Hairs on rest of dorsum about twenty-eight to thirty-two in number and arranged in rows as follows:—2, 6, 6, 6, 6, 4 or 2. There are about thirty-six to thirty-eight hairs on the venter, not including the two pairs between the coxae. Hair on galea very fine and plain, apparently being without any side hairs. Proximal segments of palp furnished with hairs which are fine and provided with only a few side hairs. Hairs on penultimate segment of palp very fine and, apparently, without any side hairs. Two or three stiff, plain, unfeathered setae are present on the palpal tarsus, and there are also four or five plumose hairs. Tarsus of first leg high, not tapering gradually. There are no plain hairs on the last tarsus, all being feathered.

Measurements.—Length of body (distended specimens), .41 mm.; its width, .21 mm. Length of dorsal scutum (in middle), 40-44 μ ; its width, 82-90 μ . Length of sensory hairs of scutum, 29-32 μ ; length of distal end of sensory hairs, 23-25 μ . Length of anterior median hair of scutum, 44 μ . Length of anterior laterals, 41-45 μ . Length of posterior lateral hairs of scutum, 58-66 μ . Length of hairs on rest of dorsum, 39-52 μ . Length of first leg (not including coxa), 219 μ ; of second leg, 173 μ ; of third leg, 231 μ .

Hab.—Robe, South Australia. Numerous specimens in the ears of rodent (*Rattus lutreola*).
